

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-37 (Canceled).

38. (Currently Amended) An architecture for monitoring quality of service in a telecommunication network comprising:

a set of mobile terminals, each mobile terminal of said set of mobile terminals housing at least one measuring agent configured to interface with processes selected from a group of processes for managing application sessions of said telecommunication network and processes executed by the mobile terminal for directly measuring operating conditions of said telecommunication network to derive therefrom a set of measurement data, wherein said at least one measuring agent is further configured to measure the load state of the mobile terminal and of the telecommunication network and to adapt processing, management and collection of the measurement data to the load state measured; and

a management and configuration subsystem comprising a scheduling module for scheduling quality of service measuring campaigns, said scheduling module identifying a subset of said set of mobile terminals according to a set of identifying characteristics of a defined measuring campaign and configuring, for executing said defined measuring campaign at least one measuring agent housed by each mobile terminal of said subset according to said set of identifying characteristics,

wherein each mobile terminal of said set of mobile terminals comprises:

an elaboration agent configured to pre-process said set of measurement data derived from said application session; and

a communication agent configured to send said set of pre-processed measurement data to said management and configuration subsystem.

39. (Previously Presented) The architecture as claimed in claim 38, wherein an additional subsystem is provided for managing a collection of measurement data resulting from said defined measurement campaign, said additional subsystem comprising at least one of a database for storing said collection of measurement data and of a processing centre for processing said collection of measurement data.

40. (Previously Presented) The architecture as claimed in claim 38, wherein said at least one measuring agent housed by each mobile terminal of said set of mobile terminals is configured to dialogue with at least one homologous measurement and management agent.

41. (Canceled)

42. (Previously Presented) The architecture as claimed in claim 39, wherein said at least one measuring agent housed by each mobile terminal of said subset is configured to perform operations selected from the group of:

conducting co-ordinated measurements on said telecommunication network,
performing local storage and pre-processing operations according to a set of processing conditions of said telecommunication network, and

managing a transfer of the collection of measurement data resulting from said defined measurement campaign to said additional subsystem.

43. (Previously Presented) The architecture as claimed in claim 38, wherein said at least one measuring agent housed by each mobile terminal of said subset is configured to conduct measurements selected from the group of:

measuring quality and operating conditions of a set of radio access parameters of said subset,

monitoring end-to-end transport performance in real traffic,

monitoring end-to-end transport performance in artificial traffic,

measuring and processing said subset to produce quality of service indicators at an application layer, and

monitoring operating conditions of a set of resources of said subset and of said telecommunication network.

44. (Canceled).

45. (Previously Presented) The architecture as claimed in claim 38, wherein said management and configuration subsystem comprises at least one communication agent that interfaces with said communication agent associated with said at least one measuring agent housed by each mobile terminal of said set of mobile terminals.

46. (Previously Presented) The architecture as claimed in claim 39, wherein said management and configuration subsystem comprises at least one communication

agent that interfaces with at least one homologous communication agent associated with said additional subsystem.

47. (Previously Presented) The architecture as claimed in claim 38, wherein said management and configuration subsystem comprises an interface for interfacing with a user.

48. (Previously Presented) The architecture as claimed in claim 39, wherein said additional subsystem comprises a communication agent configured to communicate with at least one communication agent associated with said at least one measuring agent housed by each mobile terminal of said set of mobile terminals.

49. (Previously Presented) The architecture as claimed in claim 39, wherein said additional subsystem comprises an interface for interfacing said architecture with at least one external system.

50. (Previously Presented) The architecture as claimed in claim 39, wherein said at least one measuring agent housed by each mobile terminal of said subset is configured to transfer said collection of measurement data to said additional subsystem.

51. (Previously Presented) The architecture as claimed in claim 38, wherein said at least one measuring agent housed by each mobile terminal of said set of mobile terminals operates according to Jade technology.

52. (Previously Presented) The architecture as claimed in claim 40, wherein said at least one measuring agent housed by each mobile terminal of said subset dialogue with said at least one homologous measurement and management agent with a communication resource selected from the group of:

information transport by means of SMS,

TCP/IP transport, and

UDP/IP transport.

53. (Previously Presented) The architecture as claimed in claim 38, wherein said scheduling module is configured to perform at least one operation selected from the group of:

defining the set of identifying characteristics of the defined measuring campaign,

identifying the subset of said set of mobile terminals to be subjected to said measuring campaign,

defining a set of measurements to be made and a set of quality of service indicators to be obtained,

defining a set of characteristics of the set measurements to be made, and

defining a set of contextual information associated with the set of measurements to be made and carried out by said at least one measuring agent housed by each mobile terminal of said subset.

54. (Previously Presented) The architecture as claimed in claim 38, wherein, in order to identify said subset of said set of mobile terminals, said scheduling module is configured to carry out operations selected from the group of:

continuously searching for the subset of said set of mobile terminals meeting the set of identifying characteristics of the defined measuring campaign,

recording said subset of said set of mobile terminals on an internal database, creating a measurement profile with information for conducting a set of measurements by the at least one measuring agent housed by each mobile terminal of said subset of said set of mobile terminals,

activating the defined campaign on each mobile terminal of said subset of said set of mobile terminals,

sending the set of measurements collected from each mobile terminal of said subset of said set of mobile terminals,

identifying at least one mobile terminal that no longer meets the set of identifying characteristics of the defined measuring campaign,

deactivating the defined measuring campaign, and

deleting the measurement profiles from said each mobile terminal of said subset of said set of mobile terminals.

55. (Currently Amended) A method for monitoring quality of service in a telecommunication network comprising a set of mobile terminals comprising:

associating each mobile terminal of said set of mobile terminals with at least one measuring agent configured to interface with processes selected from a group of processes for managing application sessions of said telecommunication network and processes executed by the mobile terminal for directly measuring operating conditions of said telecommunication network to derive therefrom a set of measurement data, wherein said at least one measuring agent is further configured to measure the load

state of the mobile terminal and of the telecommunication network and to adapt processing, management and collection of the measurement data to the load state measured, wherein the mobile terminals comprise:

an elaboration agent configured to pre-process said set of measurement data derived from said application session; and

a communication agent configured to send said set of pre-processed measurement data to said management and configuration subsystem, and

conducting quality of service measuring campaigns, each quality of service measuring campaign involving a subset of said set of mobile terminals according to a set of identifying characteristics of a defined measuring campaign and configuring, for executing said defined measuring campaign, at least one measuring agent associated with each mobile terminal of said subset according to said set of identifying characteristics.

56. (Previously Presented) The method as claimed in claim 55, comprising managing a collection of measurement data and providing at least one of a database for storing said collection of measurement data and a processing centre for processing said collection of measurement data.

57. (Previously Presented) The method as claimed in claim 55, comprising configuring said at least one measuring agent associated with each mobile terminal of said set of mobile terminals to dialogue with at least one homologous measurement and management agent.

58. (Canceled).

59. (Previously Presented) The method as claimed in claim 55, comprising configuring said at least one measuring agent associated with each mobile terminal of said subset to perform steps selected from the group of:

conducting co-ordinated measurements on said telecommunication network,
performing local storage and pre-processing operations according to a set of processing conditions of said telecommunication network, and
managing a transfer of a collection of measurement data resulting from conducting the defined measuring campaign to an additional sub-system for managing the collection of the measurement data.

60. (Previously Presented) The method as claimed in claim 55, comprising configuring said at least one measuring agent associated with each mobile terminal of said subset to conduct measurements selected from the group of:

measuring quality and operating conditions of a set of radio access parameters of said subset,
monitoring end-to-end transport performance in real traffic,
monitoring end-to-end transport performance in artificial traffic,
measuring and processing on said subset for the production of quality of service indicators at an application layer, and
monitoring operating conditions of a set of resources of said subset and of said telecommunication network.

61. (Previously Presented) The method as claimed in claim 55, comprising:
measuring, by means of said at least one measuring agent associated with each mobile terminal of said subset, a load state of at least one mobile terminal of said subset and/or of said telecommunication network, and
adapting a monitoring of quality of service in said telecommunication network to the measured load state.

62. (Previously Presented) The method as claimed in claim 55, comprising providing a sub-system for the management and configuration of the quality of service measurement campaigns that interfaces with said at least one measuring agent associated with each mobile terminal of said set of mobile terminals.

63. (Previously Presented) The method as claimed in claim 56, comprising:
providing a sub-system for the management and configuration of the quality of service measurement campaigns, and
providing an additional sub-system for managing the collection of measurement data that interfaces with said sub-system for the management and configuration of the quality of service measurement campaigns.

64. (Previously Presented) The method as claimed in claim 55, comprising providing a sub-system for the management and configuration of the quality of service measurement campaigns that interfaces with a user.

65. (Previously Presented) The method as claimed in claim 56, comprising providing an additional sub-system for managing the collection of measurement data

configured to communicate with said at least one measuring agent associated with each mobile terminal of said set of mobile terminals.

66. (Previously Presented) The method as claimed in claim 56, comprising providing an additional sub-system for managing the collection of measurement data configured to interface with at least one external system.

67. (Previously Presented) The method as claimed in claim 56, comprising: providing an additional sub-system for managing the collection of measurement data, and

configuring said at least one measuring agent associated with each mobile terminal of said subset to transfer said collection of measurement data to said additional sub-system.

68. (Previously Presented) The method as claimed in claim 55, wherein said at least one measuring agent associated with each mobile terminal of said set of mobile terminals operates according to Jade technology.

69. (Previously Presented) The method as claimed in claim 57, comprising configuring said at least one measuring agent associated with each mobile terminal of said set of mobile terminals for dialoguing with said homologous measurement and management agent with a communication resource selected from the group of
information transport by means of SMS,
TCP/IP transport, and
UDP/IP transport.

70. (Previously Presented) The method as claimed in claim 55, wherein conducting said quality of service measurement campaigns in turn comprises at least a step selected from the group of:

- defining the set of identifying characteristics of the defined measuring campaign,
- identifying the subset of said set of mobile terminals to be subjected to said defined measuring campaign,
- defining a set of measurements to be made and a set of quality of service indicators to be obtained,
- defining a set of characteristics of said set of measurements to be made, and
- defining a set of contextual information associated with said set of measurements to be made and carried out by said at least one measuring agent associated with each mobile terminal of said subset.

71. (Previously Presented) The method as claimed in claim 55, further comprising, in order to identify said subset of said set of mobile terminals, the steps selected from the group of:

- continuously searching for the subset of said set of mobile terminals meeting the set of identifying characteristics of the defined measuring campaign,
- recording said subset of said set of mobile terminals on an internal database,
- creating a measurement profile with information for conducting a set of measurements by the at least one measuring agent associated with each mobile terminal of said subset,
- activating the defined measuring campaign on each mobile terminal of said subset,

sending the set of measurements collected from each mobile terminal of said subset of said set of mobile terminals,
identifying at least one mobile terminal that no longer meets the set of identifying characteristics of the defined measuring campaign,
deactivating the defined measuring campaign, and
deleting the measurement profile from each mobile terminal of said subset of said set of mobile terminals.

72. (Previously Presented) A telecommunication network comprising, the architecture as claimed in claim 38, and associated with the telecommunication network.

73. (Previously Presented) The telecommunication network as claimed in claim 72, comprising at least an application server housing at least one measuring agent that interacts with said architecture.

74. (Currently Amended) A non-transitory computer-readable medium storing a computer program product for execution on a processor, the computer program product comprising portions of software code for implementing the method as claimed in any one of claims 55-57 and 59-71.

75. (Canceled)

76. (Canceled)